

Claims

1. An infusion package comprising a semi-porous open container for an infusible material and a support for supporting the container from the rim of a
5 ~~vessel, said support being capable of defining an opening through which liquid~~
can be poured into the container, said container comprising opposite side walls and divider means which divides the container into two compartments such that infusible material in one compartment is separated from that in the other compartment by said divider means.

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2. An infusion package according to claim 1, wherein the divider means comprises a gusset formed between the side walls.

3. An infusion package according to claim 2, wherein the gusset is formed
15 integrally with the side walls.

4. An infusion package according to any preceding claim, wherein the support comprises a pair of juxtaposed members which are sealed an opposite ends.

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5. An infusion package according to claim 4, wherein the sealing of the

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two members is by means of a heat seal.

6. An infusion package according to claim 4 or claim 5, wherein the upper end portion of the container is sandwiched between the juxtaposed members of

5 the support and sealed thereto by a heat seal.

7. An infusion package according to any preceding claim, wherein the support means is foldable so that it can lie alongside the container to act as a closure which closes the open container until it is ready for use.

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8. An infusion package comprising a semi-porous open container for an infusible material and a support for supporting the container from the rim of a vessel, said support being capable of defining an opening through which liquid can be poured into the container, said support being formed from juxtaposed
15 members which are sealed together at opposite ends, each sealed end portion having formed therein a crease about which said members can fold in order to facilitate opening of said support.

9. An infusion package according to claim 8, wherein each crease extends

20 axially of the container.

10. An infusion package according to claim 8 or claim 9, wherein the seal at each end portion of the support is a heat seal.

11. An infusion package according to any one of claims 8 to 10 including a ~~5. --- plurality of score lines formed on each of the juxtaposed members in a central~~ region thereof.

12. An infusion package according to claim 11, wherein the score lines extend axially of the package.

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13. An infusion package according to claim 11 or claim 12, wherein the area containing the score lines and one member is offset laterally with respect to the area contained in the score lines on the other member.

15 14. An infusion package according to any one of claims 8 to 13, wherein the support means is joined to the semi-porous container by a heat seal.

15. A support for an infusion package according to any preceding claim, said support comprising two portions foldable about an axis between a position

20 in which the portions are substantially co-planar and a position in which they are juxtaposed, said axis containing cuts including a relatively long central cut

and end cuts, the central cut in each end cut being separated by a relatively short uncut part which acts as a hinge about which the two portions can be folded.

5 ~~16.~~ A support according to claim 15, wherein each portion has a projection at one end and a recess at the other, the projection on one portion being at the same end as the recess on the other portion.

10 17. A support according to claim 15 or claim 16 wherein the support is formed from material which is heat sealable.

18. A support according to any one of claims 15 to 17 wherein the score lines on a central part of each portion extend perpendicularly to the cuts.

15 19. A support according to any one of claims 15 to 18 wherein the score lines on one portion are offset relative to those on the other.

20. An apparatus for forming an infusion package from a web of material comprising folding means for folding the web of material into substantially a

20 W-shape, means for sealing the material at positions corresponding to edges of the package, one limb of the W-shape defining a first compartment and the

other limb defining a second compartment, means for cutting the material to form from the web individual container parts, means for securing a support member to the upper open end portion of each container part to form the infusion package, filling means for filling each infusion package, and means for
5 ~~maintaining a separation between the two compartments of the container part at~~
the filling means.

21. Apparatus according to claim 20 including second folding means for folding each support member to a position in which it closes the infusion
10 package.

22. Apparatus according to claim 20 or claim 21 including a reel on which the web of material is wound.

15 23. Apparatus according to claim 22 including means for feeding the material from the reel to the folding means.

24. Apparatus according to claim 23 wherein the feeding means includes tension and/or tracking control means for controlling the tension in the web of
20 material.

25. Apparatus according to any one of claims 20 to 24 wherein the folding means comprise means for forming the web of material into substantially a U-shape and means for forming a gusset into the base of the U-shape in order to create the W-shape.

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26. Apparatus according to any one of claims 20 to 25 wherein the sealing means comprise heat sealing means.

27. Apparatus according to claim 26 wherein the heat sealing means include
10 electrically heated jaws which engage opposite sides of the folded web.

28. Apparatus according to claim 27 wherein the jaws are pneumatically or cam operated.

15 29. Apparatus according to any one of claims 20 to 25 wherein the sealing means comprise crimping means.

30. Apparatus according to any one of claims 20 to 29 wherein the cutting means are designed to form a generally vertical cut along the sealed portions of
the folded web.

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31. Apparatus according to any one of claims 20 to 30 including a source of pre-formed support members disposed downstream of the cutting means.

32. Apparatus according to any one of claims 20 to 30 in which the support
5 ~~members are formed from a web of material which is fed from a reel.~~

33. Apparatus according to any one of claims 20 to 32 including a walking beam assembly for advancing the container parts and their accompanying support member through a support member sealing section.

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34. Apparatus according to claim 33 wherein the support member sealing section comprises one or more sealing stations for heat sealing each support member to the upper open end of its associated container part.

15 35. Apparatus according to any one of claim 20 to 34 wherein the filling means includes a hopper disposed above the path of each formed infusion package, said hopper containing material to be delivered to each container part of each infusion package.

20 36. Apparatus according to claim 35 wherein the hopper contains coffee.

37. Apparatus according to claim 35 or claim 36 wherein the mouth of the hopper includes an auger for delivering a predetermined quantity of material to each package.

5 38. Apparatus according to any one of claim 20 to 37 wherein separation maintaining means comprise an elongate beam which is straddled by said compartments.

39. Apparatus according to claim 38 wherein the beam extends from a
10 position close to said cutting means along the path of the container parts to said filling means in order to maintain separated the two compartments defined by the W-shape of each container part.

40. Apparatus according to any one of claims 20 to 37 wherein the
15 separation maintaining means comprise a finger locatable between said two compartments at the filling means.

41. Apparatus according claim 40 wherein the finger is disposed beneath
the filling means and is movable upwardly to locate between said
20 compartments.

42. Apparatus according to claim 41 wherein the finger is pneumatically or cam actuated.

43. Apparatus according to any one of claims 20 to 42 including a sachet
5. ~~forming portion disposed downstream of the support member folding section.~~

44. A method of forming an infusion package from a web of material comprising folding the web of material into substantially a W-shape, sealing the folded web at positions corresponding to edge portions of a container part
10 of the package, cutting the web along the sealed portions to form individual container parts, attaching a support to each container portion, and filling the two compartments defined by the W-shape of each container part whilst holding apart said compartments to ensure equal distribution of the filled material into each compartment.

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45. An apparatus for forming an infusion package from a web material comprising folding means for folding the web of material into substantially a W-shape, means for sealing the material of each limb of the W-shape at positions corresponding to the edges of a container part of the package so that
20 one limb of the W-shape defines a first compartment and the other limb defines a second compartment, means for cutting the material to form from the web

individual container parts, means for securing a support member to the upper end portion of each container part to form an infusion package and means for filling each infusion package, wherein said sealing means includes a heated blade so disposed that said limbs of the W pass on either side thereof, and a
 5 ~~pair of oppositely disposed sealing jaws actuable to press the edge portions~~ of each compartment against the heated blade to effect heat sealing thereof.

46. An apparatus for forming an infusion package from a web of material comprising: folding means for folding a web of material to define limbs which
 10 are to form the walls for a container part of the package, sealing means for sealing the limbs at positions corresponding to the edge of the container, means for cutting the material to form from the web individual container parts, means for securing a support member to the upper open end portion of each container part to form the infusion package and means for filling each infusion package,
 15 wherein the means for securing the support member includes an elongate heated member disposed so that an upper part of said limbs can pass one of each side thereof and a pair of opposite disposed sealing jaws actuable to press the upper part of each limb against a juxtaposed part of a support member to effect heat sealing therebetween.

47. A method of forming an infusion package comprising folded a web of

material into substantially a W-shape, passing the limbs of the W-shape on either side of a heated plate, pressing the material of each limb at positions corresponding to each portions of a compartment of a container part of the infusion package against the heated plate to effect sealing thereof, cutting the
5 ~~web along the sealed portions to form individual container parts, attaching a~~
support to each container part and filling the compartments of the container part.

48. A method of attaching a support element to the upper open part of a
10 container portion of an infusion package comprising providing a support
element comprising oppositely disposed support members, locating the support
members on either side of said upper container portion part, passing the
support members with said upper container portion parts one on either side of a
heated member and pressing each support and upper container portion part
15 against the heating member to effect heat sealing between each support
member and the container part.

49. An apparatus for forming an infusion package from a web of material
comprising: folding means for folding a web of material to define limbs which
20 are to form the walls for a container part of the package, sealing means for
sealing the limbs at positions corresponding to the edge of the container, means

for cutting the material to form from the web individual container parts, means for securing a support member to the upper open end portion of each container part to form the infusion package and means for filling each infusion package, wherein said apparatus includes means for forming a crease or creases in the
5. support element.

50. A method of attaching a support element to the upper open part of a container portion of an infusion package comprising providing a support element comprising oppositely disposed support members, locating the support
10 members on either side of said upper container portion part, passing the support members with said upper container portion parts one on either side of a heated member, pressing each support and upper container portion part against the heating member to effect heat sealing between each support member and the container part, and forming a crease or creases in said support element.

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